

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 10213784
PUBLICATION DATE : 11-08-98

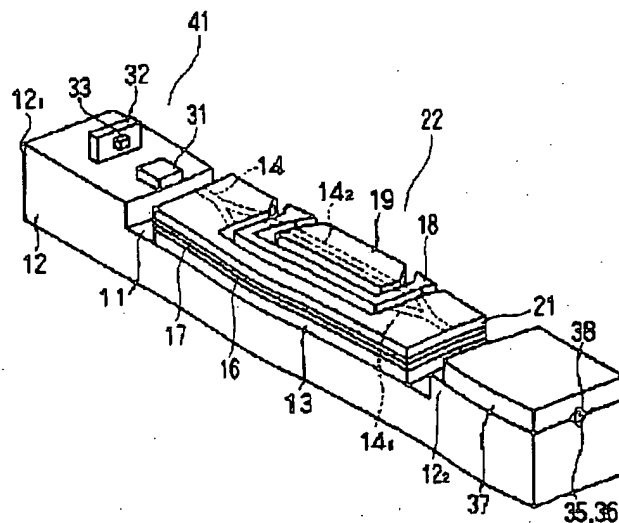
APPLICATION DATE : 31-01-97
APPLICATION NUMBER : 09018134

APPLICANT : NEC CORP;

INVENTOR : AKIYAMA KOICHI;

INT.CL. : G02F 1/035 G02B 6/12 G02B 6/30
G02B 6/42

TITLE : INTEGRATION TYPE OPTICAL
MODULATOR



ABSTRACT : PROBLEM TO BE SOLVED: To obtain an integration type optical modulator capable of attaining the high density of optical parts.

SOLUTION: Dielectric crystal 13 is formed on the recessed part of a silicon substrate 12 of which both end parts are formed as projected parts 12₁, 12₂, an optical waveguide 14 is formed on the crystal 13 and a signal electrode 18 and a ground electrode 19 are formed on the waveguide 14 to prepare a modulation element 22. A light emitting element 41 consisting of an LD pair chip 31 is arranged on the projected part 12₁ arranged on an incident side, a V groove 35 is formed on the other projected part 12₂ and an optical fiber 38 arranged along the groove 35 is fixed by a glass cover 37. Since the light emitting element 41 and the modulation element 22 are arranged on the substrate 12, optical parts are integrated at high density and the size of the optical modulator is reduced.

COPYRIGHT: (C)1998,JPO